

REMARKS

35 U.S.C. § 112 Rejections

The Examiner has rejected claims 26-28 as being indefinite pursuant to 35 U.S.C. § 112 because the Examiner argues that “the tube” lacks antecedent basis. Applicants have canceled claim 26. However, claims 27-28, which also used the term “tube,” have been amended to clarify the proper antecedent basis. Accordingly, the Examiner may now withdraw the § 112 rejections.

35 U.S.C. §§ 102 and 103 Rejections

The Examiner has rejected claims 1-4, 16 and 22-25 as being anticipated pursuant to 35 U.S.C. § 102(b) by U.S. Patent No. 5,514,108 (“Stevens”). The Examiner has also rejected claims 1 and 22-28 as being anticipated pursuant to 35 U.S.C. § 102(e) by U.S. Patent No. 6,994,700 (“Elkins”). The Examiner has also rejected claims 1 and 29 as being anticipated pursuant to 35 U.S.C. § 102(b) by U.S. Patent No. 5,437,288 (“Schwartz”). The Examiner has also rejected claims 5-7, 11, 13-15 and 17-21 as being unpatentable pursuant to 35 U.S.C. § 103(a) over PCT Publication No. WO 89/02763 (“Wijay”) in view of Stevens. The Examiner has also rejected claims 8-10 and 12 as being unpatentable pursuant to 35 U.S.C. § 103(a) over Wijay and Stevens further in view of U.S. Patent No. 5,542,926 (“Crocker”).

Applicant has carefully considered the Examiner’s comments. In an effort to expedite allowance of Applicant’s claims, Applicant has amended claims 1-25 and 27-29 and has canceled claim 26. Accordingly, Applicant respectfully submits that Applicant’s claims are now in condition for allowance.

In particular, Applicant has amended claim 1 to clarify the meaning of the corrugated region. Thus, claim 1 now recites that the corrugated region is “longitudinally compressible” and that the corrugated region has a wall thickness that is “substantially the same” as the wall thickness of the proximal and distal tip ends. Neither Stevens nor Schwartz disclose these limitations. Therefore, Stevens and Schwartz cannot anticipate Applicant’s claims.

Specifically, Stevens discloses a flexible tip portion 12. However, the flexibility referred to by Stevens is transverse flexibility, not longitudinal flexibility. (Column 2, lines 48-59). As shown in Figure 1, Stevens desires a tip portion 12 that bends transversely when a perpendicular force F is applied to the tip 12. In contrast, Applicant's claimed flexible catheter tip is longitudinally flexible by providing a corrugated region that is longitudinally compressible. Moreover, the wall thickness of Applicant's corrugated region is substantially the same as the wall thickness of the proximal and distal tip ends. There is no disclosure in Stevens that the tip portion disclosed therein is longitudinally compressible as claimed by Applicant. Indeed, it is clear from the cross-sectional view of Figure 3 of Stevens that the Stevens tip portion would not be longitudinally compressible. Further, it is also clear that the wall thickness of Stevens' tip portion is not substantially uniform. In fact, the Examiner has essentially admitted this because the uniform wall thickness limitation is similar to the limitation of canceled claim 26. However, the Examiner never argued that Stevens discloses the limitation of claim 26.

Likewise, the Examiner never argued that Schwartz discloses the limitation of canceled claim 26. Therefore, the Examiner has also essentially admitted that Schwartz does not disclose a corrugated region with a uniform wall thickness as now claimed by claim 1. Indeed, it is clear from the figures of Schwartz that Schwartz does not disclose this limitation. In addition, like Stevens, Schwartz discloses a flexible portion 13 that is radially or transversely flexible, not longitudinally flexible. (Column 4, lines 8-11). Indeed, Schwartz is specifically concerned about maintaining the column strength of the flexible portion 13. (Column 4, lines 21-24). Thus, Schwartz is not longitudinally compressible as recited in claim 1.

Turning to Elkins, while Elkins discloses a corrugated region on a catheter, Elkins' corrugated region is not at the location claimed by Applicant and is used for an entirely different purpose. In Elkins, pleats 222 are disposed at the proximal end 208 of an adjustable introducer sheath 204. (Column 13, lines 3-65). The purpose of the pleats 222 is to allow the distal end 206 of the introducer sheath 204 to be retracted without pulling away the proximal end 208 from the insertion point 192. (Column 13, lines 3-11). In order to achieve this, Elkins requires an external retaining tube 220 or an

internal support 224 to prevent the pleats 222 from prematurely folding. (Column 13, lines 18-21, 34-36). By contrast, Applicant has amended claim 1 to more clearly recite that the corrugated region is located on the catheter tip at the distal end of the catheter. Thus, the corrugated region that is claimed is at the opposite end of the catheter from Elkins' pleats. Moreover, it would not be apparent that Elkins' pleats could be moved to the distal tip of a catheter because Elkins' pleats are used for a different purpose than Applicant's corrugated region. In Applicant's invention, the corrugated region enables the catheter tip to compress so that it does not puncture internal organs. (¶¶ [0035]-[0036]). Indeed, Elkins' pleats do not even enter the body, but instead, remain outside the body during the entire procedure, since it is intended to be a control device. Applicant's corrugated region also enables the catheter tip to better conform to the wire guide. (¶ [0036]). However, Elkins' pleats are not used for this because they are located at the proximal end of the catheter, not at the distal end. Moreover, as explained above, Elkins uses an internal or external restraint to prevent the pleats from prematurely compressing. Thus, Elkins' device actually prevents the pleats from conforming to the wire guide. Therefore, Elkins does not disclose all of the limitations of claim 1 as now presented, and it would not be apparent to use the pleats disclosed in Elkins in a catheter tip as claimed by Applicant.

Accordingly, Applicant respectfully submits that claim 1 as now presented is allowable over Stevens, Schwartz and Elkins. Because dependent claims 2-25 and 27-29 contain all of the limitations of claim 1, these claims are also allowable. Thus, any other arguments that could be made in support of Applicant's dependent claims are unnecessary and would be superfluous at this time.

Conclusion

In response to the Examiner's comments, Applicant has amended claims 1-25 and 27-29 and have canceled claim 26. Because Stevens, Schwartz and Elkins do not disclose all of the limitations of Applicant's claims as now presented, claims 1-25 and 27-29 are allowable as presented. Accordingly, Applicant requests reconsideration and allowance of the application.

Respectfully submitted,

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